

REMARKS

Claims 1 through 4 and 6 through 29 are pending in the application.

Claim 1 has been amended to reflect advantageous food casings in which the reinforcement is a consolidated nonwoven fabric, spunbonded fabric, a woven fabric, loop-formingly knitted fabric, loop-drawingly knitted fabric, laid fabric or fibrous paper. Support for this amendment can be found in the Application-as-filed, for example in Claim 2 and Page 5, lines 3 through 4.

Accordingly, Claim 2 has been canceled as its subject matter has been incorporated into Claim 1.

Claim 6 has been amended to recite the term "comprises" for the term "consists of." Support for this amendment can be found in the Application-as-filed, for example in Claim 6 as-filed.

Claim 25 has been amended to correct a typographical error and to further reflect advantageous embodiments in which the film-former consists of gelatin or collagen. Support for this amendment can be found in the Application-as-filed, for example in Claim 6 as-filed and further on Page 5, lines 20 through 27; Page 13, line 1 through 24 and Page 14, lines 10 through 25.

Applicants respectfully submit that this response does not raise new issues, but merely places the above-referenced application either in condition for allowance, or alternatively, in better form for appeal. Reexamination and reconsideration of this application, withdrawal of all rejections, and formal notification of the allowability of the pending claims are earnestly solicited in light of the remarks which follow.

Section 112 Rejection

Claim 6 remains rejected over the recitation "consisting of." Without addressing the merits of the rejection and solely to advance prosecution of the above-referenced case, Claim 6 has been amended to instead recite the term "comprises" in lieu of "consisting of." Accordingly, Applicants respectfully request withdrawal of the foregoing rejection.

The Claimed Invention is Patentable

in Light of the Art of Record

Claims 1 through 4, 6 through 8, 10 through 17, 19 through 27 and 29 stand rejected over WIPO Publication WO 98/34490, whose United States equivalent is United States Patent No. 6,902,783 (US 783) in view of United States Patent No. 3,494,772 (US 772) to Noel et al.

Claims 1 and 9 stands rejected over US 783 and US 772 in view of United States Published Application No. 2002/0064580 (US 580) to Gord et al.

Claims 1 and 18 stands rejected over US 783 and US 772 in view of United States Patent No. 5,955,126 (US 126) to Jon et al.

Claims 1 and 28 stands rejected over United States Patent No. 5,043,194 (US 194) to Siebrecht et al and US 783.

It may be useful to briefly consider the invention before addressing the merits of the rejection.

Cellulosic food casings have long been known in the art. Processes by which to form cellulosic food casings generally involve extruding a solution of either viscose-cellulose or NMMO-cellulose. Unfortunately, the formation of cellulosic food casings is both expensive and environmentally challenging.

Altogether unexpectedly, Applicants have found food casings which can be produced simply, inexpensively, and in an environmentally friendly manner.

Applicants have more particularly determined that casings formed from fibrous web reinforcements that have been coated with a film-forming-protein composition can be produced simply and inexpensively. The coating may optionally include up to a maximum of 5% by weight cellulosic filler. If the film-forming protein is water-soluble, the coating also incorporates at least one compound to crosslink the protein. Advantageously, the fibrous support web has a weight of 3 to 400 g/m².

In particularly advantageous embodiments, the reinforcement is a consolidated nonwoven or spunbonded fabric, a woven fabric, loop-formingly knitted fabric, loop-drawingly knitted fabric, laid fabric, or a fibrous paper, as recited in Claim 1 as-amended.

In expedient embodiments, the fibrous- material coating includes film-former consisting of gelatin or collagen, as recited in Claim 25 as-amended.

Applicants respectfully reiterate that the cited references do not teach or suggest the claimed invention.

Applicants particularly respectfully submit that none of the cited references teaches or suggests casings formed from protein coated fabrics or papers, much less fabrics or papers having a weight of up to 400 g/m² (Claim 1), as recited in Claim 1 as-amended. The cited references similarly fail to each or suggest fibrous material having a weight of up to 1000 g/m² that are coated with film former consisting of gelatin and/or collagen (Claim 25), as recited in Claim 25 as-amended.

Applicants respectfully reiterate that US 783 is directed to extruded, edible films, i.e. “edible shaped bodies,” formed from thermoplastic biopolymers, such as thermoplastic starch. (Col. 1, lines 37 through 40; Col. 1, lines 52 – 67; Col. 2, lines 38 – 41 and Col. 4, lines 26 - 30). US 783 expressly teaches that collagen is unsuitable for use as a biopolymer. (Col. 2, lines 52 – 53). To strengthen the films, the biopolymer blends may further include wood pulp or the like, presumably in edible quantities. (Col. 3, lines 44 – 46). The wood pulp fibers of US 783 have a length of at most 5 mm, preferably at most 2 mm. (Col. 3, lines 48 – 50).

Applicants respectfully reiterate that US 783, solely directed to extruded films, does not teach or suggest the claimed food casings formed from coated reinforcement.

Thus US 783 can not teach or suggest such inventive casings incorporating fabrics or paper as reinforcement, as recited in Claim 1 as-amended. Applicants respectfully submit that to modify US 783 so as to include the recited fabric or paper would render US 783 unfit for its intended use as an edible film.

And US 783 most certainly can not teach or suggest such advantageous food casings incorporating fabric or paper having a weight of either up to 400 g/m², as further recited in Claim 1.

US 783, directed to extrudable starch blends and expressly teaching away from collagen, likewise fails to teach or suggest coated food casings incorporating film-former consisting of gelatin or collagen, as recited in Claim 25 as-amended.

Nor does US 783 teach or suggest such advantageous food casings incorporating fibrous material having a weight of up to 1000 g/m², as further recited in Claim 25.

Accordingly, Applicants respectfully reiterate that the claimed invention is patentable in light of US 783, considered either alone or in any combination with the remaining art of record.

US 772 does not cure the deficiencies in US 783.

US 772 is also directed to edible sausage casings. US 772 is more particularly directed to edible sausage casings formed from a “continuous phase” of edible alginate containing a “network” of edible collagen fiber. (Col. 1, lines 47 – 52) In contrast to the Examiner’s urgings in the outstanding Office Action at Ref. No. 42, US 772 explicitly states “[i]n the work leading to the invention we extruded casings from collagen itself, a matter of great difficulty, which were tough to eat and on frying tended to split and shrink and extrude the meat.” (Col. 2, lines 42 – 47). US 772 goes on to indicate that the further incorporation of alginate solved the foregoing issues with collagen, with US 772 preferably including up to 60 % alginate. (Col. 2, lines 8 – 13 and Col. 2, lines 51 -58). The collagen fibers of US 772 are up to 25 mm long and initially have a diameter of up to about 0.1 mm. (Col. 2, lines 62 – 67). US 772 teaches that the proportion of the alginate to fibrous collagen can range up to 90:10. (Col. 2, line 71 – Col. 3, line 1).

US 772, solely directed to edible film, likewise does not teach or suggest the claimed food casings formed from a coated reinforcement.

Applicants specifically respectfully submit that US 772 does not teach or suggest casings incorporating the advantageous fabrics or paper recited in Claim 1 as-amended. Applicants respectfully submit that to modify US 772 so as to include the recited fabric or paper would likewise render US 772 unfit for its intended use as an edible film.

And US 772 most certainly does not teach or suggest such advantageous food casings incorporating fabrics or paper having a weight of up to 400 g/m², as further recited in Claims 1.

US 772, expressly requiring alginate, likewise fails to teach or suggest coated food casings incorporating film-former consisting of gelatin or collagen, as recited in Claim 25 as-amended. Applicants further respectfully submit that to modify US 772 so as to avoid its required alginate would altogether change its principle of operation.

Nor does US 772 teach or suggest such advantageous food casings incorporating fibrous material having a weight of up to 1000 g/m^2 , as further recited in Claim 25.

Accordingly, Applicants respectfully reiterate that the claimed invention is similarly patentable in light of US 772, considered either alone or in any combination with the remaining art of record.

There would have been no motivation to have combined US 783 and US 772. However, even if US 783 and US 772 were combined (which Applicants did not), the claimed invention would not have resulted.

The combination, both solely directed to edible films, simply does not teach or suggest the claimed food casings formed from a coated reinforcement.

Applicants specifically respectfully submit that the combination does not teach or suggest casings incorporating the advantageous fabrics or paper recited in Claim 1 as-amended. Applicants respectfully submit that to modify either US 783 or US 772 so as to include the recited fabric or paper would render them unfit for their intended purpose as an edible film. Hence there would have been no motivation to have included the recited fabrics or paper within US 783 or US 772. Applicants further respectfully submit that one skilled in the art would readily understand that the claimed fabric/paper reinforced casings are clearly inedible, in sharp contrast to the casings of US 783 and US 772, which by their own admission are required to be edible. Applicants are further prepared to submit a declaration under 35 USC 132 regarding the inedible nature of the claimed casings, should the Examiner ultimately deem such declaration necessary.

And the combination most certainly does not teach or suggest such advantageous food casings incorporating fabric or paper having a weight of up to 400 g/m^2 , as further recited in Claim 1. Applicants further respectfully submit that there would have been no motivation to

have "optimized" US 783 and US 772 by incorporating a fabric or paper having a weight of up to 400 g/m², as this increase in "structural integrity" would have led to an inedible film.

The combination further does not teach or suggest such coated webs in which the coating contains a film-forming protein and a maximum of 5 % by weight of cellulosic filler. US 783 merely teaches extrusion of any of a number of biopolymers that can contain up to 30 % filler. US 772 require a specific fibrous protein within alginate films. Applicants further respectfully submit that the apparent urging of the Office Action on Page 7, Ref. No. 18, that compositions suitable for extrusion, such as provided in US 783 and US 772, may be imputed to coatings is pure conjecture, at best. As well known by those skilled in the art, extrusion compositions differ greatly from coating compositions.

The combination likewise fails to teach or suggest coated food casings incorporating film-former consisting of gelatin or collagen, as recited in Claim 25 as-amended. US 783 teaches extrudable starch blends and expressly teaches away from collagen, while US 772 expressly requires an alginate film-former.

Nor does combination teach or suggest such advantageous food casings incorporating fibrous material having a weight of up to 1000 g/m², as further recited in Claim 25.

Accordingly, Applicants respectfully submit that the claimed invention is patentable in light of US 782 and US 772, considered either alone or in any combination with the remaining art of record.

As the advantageous embodiments of Claim 2 have been incorporated into Claim 1, Applicants respectfully submit that the claimed invention is likewise patentable in further light of US 580, US 126 and US 194, as kindly indicated by the Examiner.

Accordingly, Applicants respectfully submit that the claimed invention is patentable in light of the art of record, considered either alone or in any combination.

CONCLUSION

It is respectfully submitted that Applicants have made a significant and important contribution to the art, which is neither disclosed nor suggested in the art. It is believed that all of pending Claims 1, 3, 4 and 6 through 29 are now in condition for immediate allowance. It is requested that the Examiner telephone the undersigned if any questions remain to expedite examination of this application.

It is not believed that extensions of time or fees are required, beyond those which may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time and/or fees are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required is hereby authorized to be charged to Deposit Account No. 50-2193.

Respectfully submitted,

Cathy Moore

Cathy R. Moore
Reg. No. 45,764

ProPat, L.L.C.
425-C South Sharon Amity Road
Charlotte, NC 28211-2841
Telephone: (704) 365-4881
Fax: (704) 365-4851
Customer No. 38263

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Claire Wygand Claire Wygand